

CLAIMS

1. A liquid absorbing sheet comprising a liquid  
absorbing resin layer, wherein the liquid absorbing  
5 resin layer is obtained by irradiating UV-rays onto a  
monomer composition to polymerize the monomer  
composition, the monomer composition containing:

a monofunctional monomer component (A) containing  
a monofunctional monomer (a) capable of forming a  
10 homopolymer that is soluble in a nonaqueous solvent  
used in a nonaqueous electrolyte secondary battery;  
and

a polyfunctional monomer component (B).

15 2. The liquid absorbing sheet according to claim  
1, wherein the difference between a solubility  
parameter value of the monofunctional monomer (a) and  
a solubility parameter value of the nonaqueous solvent  
is in the range of -1.0 to 8.0.

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3. The liquid absorbing sheet according to claim  
2, wherein the nonaqueous solvent has a solubility  
parameter value of 17 to 28.

25 4. The liquid absorbing sheet according to claim  
1, wherein the nonaqueous solvent contains at least

one of dimethyl carbonate, propylene carbonate, and ethylene carbonate, and the homopolymer is obtained by adding 0.1 to 5 parts by weight of a UV-polymerization initiator per 100 parts by weight of the  
5 monofunctional monomer (a) and irradiating UV-rays onto the mixture.

5. The liquid absorbing sheet according to claim 4, wherein the homopolymer dissolves in the nonaqueous  
10 solvent when 1 part by weight of the homopolymer is immersed in 30 parts by weight of the mixed solvent at room temperature for 24 hours.

6. The liquid absorbing sheet according to any  
15 one of claims 1 to 5, wherein the monofunctional monomer (a) is benzyl acrylate, N-vinyl-2-pyrrolidone, imide acrylate, acryloyl morpholine, phenoxyethyl acrylate, N,N-diethylacrylamide, methoxypolyethylene glycol acrylate, tetrahydrofurfuryl acrylate, or  
20 phoxypolyethylene glycol acrylate.

7. The liquid absorbing sheet according to claim 1, wherein the liquid absorbing resin layer has a crosslink density of 0.0001 to 0.17.

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8. The liquid absorbing sheet according to any

one of claims 1 to 7, wherein the liquid absorbing resin layer is formed on a substrate.

9. The liquid absorbing sheet according to claim 5 8, wherein the substrate is capable of absorbing and retaining the nonaqueous electrolyte solution.

10. The liquid absorbing sheet according to claim 1, wherein the monomer composition further 10 contains a phosphate-based liquid flame retardant.

11. The liquid absorbing sheet according to claim 10, wherein the phosphate-based liquid flame retardant is bisphenol A bis(diphenyl)phosphate, 15 hydroquinol bis(diphenyl)phosphate, phenyl dixylenyl phosphate, tricresyl phosphate, cresyl diphenyl phosphate, trixylenyl phosphate, xylenyl diphenyl phosphate, resorcinol bis(diphenyl)phosphate, or 2-ethylhexyl diphenyl phosphate.

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12. The liquid absorbing sheet according to claim 10 or 11, wherein the phosphate-based liquid flame retardant is present in the monomer composition in an amount of 70 to 200 parts by weight with respect 25 to 100 parts by weight of the monofunctional monomer component (A) and the polyfunctional monomer component

(B) combined.

13. A nonaqueous electrolyte battery pack  
comprising a nonaqueous electrolyte battery cell, a  
5 circuit board, an electrolyte-absorbing element for  
absorbing an electrolyte solution in the event of  
electrolyte leakage from the nonaqueous electrolyte  
battery cell, and a battery case encasing the battery  
cell, the circuit board and the electrolyte-absorbing  
10 element, characterized in that the electrolyte-  
absorbing element is formed of the liquid absorbing  
sheet according to any one of claims 1 to 12.